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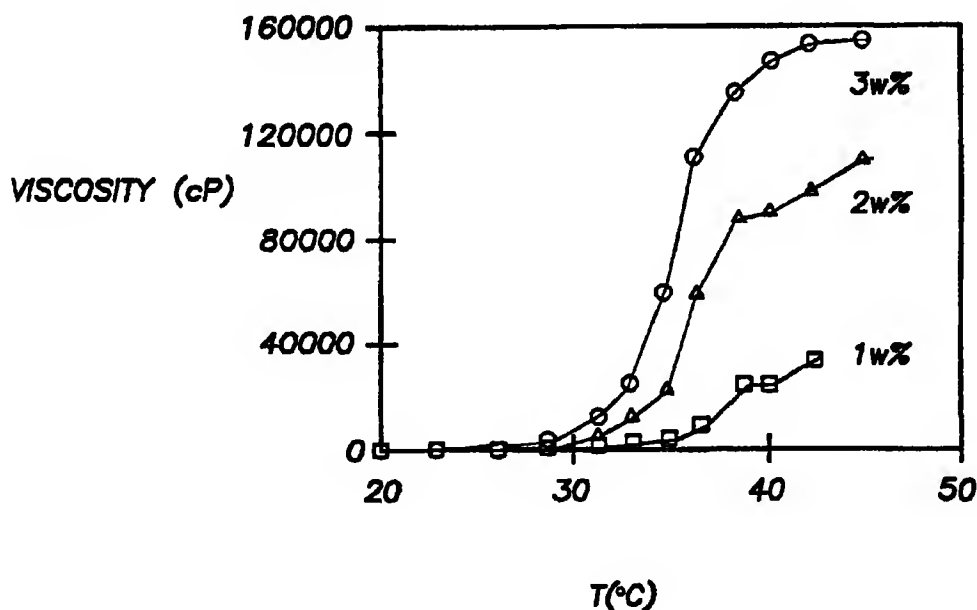
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(54) Title: RESPONSIVE POLYMER NETWORKS AND METHODS OF THEIR USE



## (57) Abstract

A polymer network exhibiting the property of reversible gelation in response to a change in an environmental stimulus is provided. The solvated network polymer, comprises about 0.01 to 20 wt.% of an associating component linked to about 0.01 to 20 wt.% of a solvophilic component. The solvated composition exhibits at least a five-fold increase in viscosity upon gelation. The gelation may be triggered by a change in an environmental stimulus, such as temperature, pH and ionic strength.